IT Plan – Agency Submitted

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Review of Agency's IT Architecture
The ND Department of Health (NDDoH) continues to manage its information technology (IT) hardware and software through our information technology coordinators located throughout the department. Our coordinators are assigned to specific sections and divisions within the department and are responsible for coordinating the IT activities for that section. Because the department is located at three primary locations around the city of Bismarck, the NDDoH has designated one of these coordinators as the department lead IT coordinator. This lead position works closely with management and the other coordinators to effectively manage IT at a department level. The IT strategy of the department depends on the effective communication and coordination of the department's IT coordinators. The goals of this group are to continue to promote departmental system integration where it is affordable and sensible, standardize hardware and software configurations, develop and encourage information sharing across the department and with our external partners and customers, and to provide proactive IT service delivery.

The NDDoH relies heavily on the use of current technologies to provide it's valuable support and services to ensuring that North Dakota is a healthy place to live and that each person has an equal opportunity to enjoy good health. We advance our mission by networking, facilitating local efforts, collaborating with partners and stakeholders and providing expertise in developing creative public health solutions using these technologies.

The NDDoH continues to rely on the on the Information Technology Department (ITD) to provide essential telecommunications, data processing and network services to the department so that we may conduct our daily business functions. These services include, but are not limited to, telephone, voice mail, Internet access and LAN and WAN access across the state's high-speed network. These essential services benefit all the customers and employees of the department. Without the use of these essential services, the department would not be able to function and serve the people of North Dakota.

The NDDoH continues to rely on the effective use of personal computers (PCs) across the state's high-speed wide area network. The department currently maintains over 300 PCs, more than 100 laptops and about 40 high-output laser printers. The NDDoH maintains a wide variety of custom software applications and databases. These systems range in complexity from fully functional web-enabled applications, to intricate laboratory and analysis systems, to single function MS Access databases. The department continues to acquire federally developed software solutions that are typically mandated and provided at a nominal cost. Support and coordination for these software solutions are managed by the department's IT coordinators as they focus their efforts on department wide solutions. The primary software focus of the department is to continue to move new and existing solutions to the web when possible and integrate these solutions when it makes sense.   The department's significant business applications are listed below:

1) *Vital Statistics* - This system allows the Division of Vital Records to capture and maintain vital event data, including birth, death, fetal death, abortion, marriage and divorce records. Electronic Vital Event Reporting (EVER) was released in January 2006 as a way for hospitals to electronically report birth event information via the web. Our 2008

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upgrade added death and fetal death registration used by funeral homes, physicians, coroners and the state medical examiner. This system is a combination of Powerbuilder and J2EE compliant Internet applications and uses an Oracle database. The applications used within this system are maintained by ITD and must follow an upgrade schedule maintained by ITD. DOH IT Coordinator - Darin Meschke.

2) _NDIIS_ - The North Dakota Immunization Information System is a statewide immunization registry that is used by 98% of public immunization sites and 91% of private childhood immunization sites in the state. The registry provides easy access and storage of immunization information for all residents of the state; however, it is primarily used for children. This system has been in use since 1988 and is used by our Division of Disease Control. The application is presently a web-based application written in JAVA and Visual Basic and uses a MS SQL database. The software used for this system in maintained by Blue Cross/Blue Shield of North Dakota. DOH IT Coordinator - Jennifer Messer.

3) _AIRS_ - The ambient air quality system stores data collected by the data acquisition system located at various monitoring sites throughout the state. Data collected is then provided to the Environmental Protection Agency (EPA). This LAN-based application was originally purchased in 1980 and is used by the Division of Air Quality. Written in MS Access and Visual Basic, the data is stored in an MS Access database. DOH IT Coordinator - Allen Johnson.

4) _SDWIS_ - The Safe Drinking Water Information System provides a means to create and maintain safe drinking water information and the ability to transfer that data electronically to the EPA. The latest version of the systems was released in April 2006 and is used by our Division of Water Quality. Written in SQL, this system uses an Oracle database. DOH IT Coordinator - Allen Johnson.

5) _WICnet_ - WICnet is a web-based system used by our Division of Nutrition and Physical Activity for the North Dakota Women, Infants and Children (WIC) program and was implemented statewide on January 9th, 2006. WICnet is used to collect data on participants, including demographics, income, anthropometrics, nutrition education, careplan, referral data, and food packages. It also has the ability to schedule appointments, print checks on demand, plot growth charts, capture statewide messages, and produce various reports. The system runs either in connected (internet) mode or in a disconnected (no internet) mode. WICnet is a smart client application with web components developed in VB.NET and uses a MS SQL database. DOH IT Coordinator - Corey Bergrud.

6) _NDCR_ - The North Dakota Cancer Registry is used to collect all cancer related data from clinics, hospitals and laboratories in the state. The information collected is transmitted to the Centers for Disease Control and Prevention (CDC), so that it can be merged into the national database. Originally developed in 1996, the system is solely used by the Division of Cancer Prevention and Control. Written in is written in C and VB .Net using SQL Server 2000 for the database. DOH IT Coordinator - Corey Bergrud.

7) _StarLIMS V9.414_ - StarLims Sunrise Version 2 was deployed in production September of 2005 by the Division of Laboratory Services - Microbiology. This system serves as the Laboratory Information Management System (LIMS) for the Microbiology Laboratory. The main functions of StarLIMS include specimen management, test resulting and reporting, electronic laboratory reporting, accounts receivable billing and specimen/test records management. Future enhancements include inventory management, generating grant report statistics and mutual assistance functionality. StarLIMS uses a MS SQL database. DOH IT Coordinator - Kevin Kosse.

8) _NWA LIMS_ - The department's Laboratory Information Management System stores all the information associated with the analysis of samples submitted to the Division of Laboratory Services - Chemistry, along with some types of environmental samples submitted to the Division of Laboratory Services - Microbiology. Originally implemented in 1987, the system not only provides analysis services to the department, but also to several outside agencies including the EPA, Public Service Commission, Department of Agriculture, Public Water Plants and private citizens. Written in a proprietary language, this system uses a Pervasive database. DOH IT Coordinator - Kevin Kosse.

9) _ASPEN_ - The Automated Survey Processing ENvironment is utilized by all facility surveyors with the Division of Health Facilities. All information collected regarding state

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and federal survey certification is stored in this system and sent to the Denver regional office and the Baltimore central office for the Centers for Medicare and Medicaid Services (CMS). Written in MS Access, this system uses an Oracle database. DOH IT Coordinator - Todd Frieze.

10) _HAN_ - The Health Alert Network is statewide, integrated information and communications system primarily used to distribute health alerts, advisories and updates relating to emergency/disaster events and prevention guidelines, through multiple means of communications. This system is used by the Emergency Preparedness Section and uses a MS SQL database. DOH IT Coordinator - William James.

11) _EDSS_ - The Electronic Disease Surveillience System is utilized by the Division of Disease Control and forms the foundation of public health surveillance in the state. This new system replaced the old DREAMS system because of it's inability to move forward with the needs of the division. The system allows the department to efficiently monitor and more rapidly report disease information to the appropriate agencies and also includes an outbreak management component to allow the department to more effectively manage disease outbreaks. The system will also allow hospital laboratories to automatically submit lab test data directly into the system without the need for manual data entry. This system uses an Oracle database. DOH IT Coordinator - Jennifer Messer.

The department continues to provide assistance and leadership to the state's Enterprise Architecture (EA) initiative, including representation on the State Information Technology Advisory Committee (SITAC). The NDDoH has representatives on many of the domain teams within EA, as the state progresses in its efforts at deploying enterprise wide solutions, effectively and efficiently across state government. The department recognizes the need for a cohesive statewide plan of action to develop the infrastructure for all state agencies and to include local public health units, hospitals, laboratories, tribal health, military health and the general public.

Planned Infrastructure Activities and Changes

GOAL: Maintain secure and reliable telecommunication services and computer networks

Objective(s):

1) Secure both telecommuncations and computer network services throught the Information Technology Department (ITD). These services are essential to the effectiveness of the entire department. This is a continual ongoing goal of the NDDoH.

Comments:

This goal relates to the services provided by the Information Technology Department. The services that are included here are as follows:

    1) All telecommunications.
    2) All monthly network device charges.
    3) All system/database hosting fees.
    4) All miscellaneous fees, including ConnectND, Liquid Office, Records Management, File and Print, etc.
    5) All miscellaneous software maintenance to existing ITD applications

GOAL: Maintain and promote the use of office automation standards and practices within the NDDoH.

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Objective(s):

1) Hardware upgrades: Maintain a four-year replacement schedule for all department PC workstations and laptops to ensure that NDDoH staff continue to work efficiently and effectively.

2) Software upgrades: Maintain a routine schedule for the upgrade of PC workstation software, including office automation suites (MS Office) and operating systems.

Comments:

This goal relates to computer and software replacements that will occur during the biennium. The DOH typically replaces about 1/2 of all existing PC hardware and software each biennium. This replacement would include a new HP computer and the latest version of Microsoft Office software. Any other user specific software is typically updated on an as needed basis.

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1. If applicable, describe the reason for any extraordinary increase or decrease in your infrastructure costs.

2. Total number of desktop computers: 341
   Number of desktops for which you are requesting replacement funding: 160
   Average replacement cost/desktop: 1,200

3. Total number of laptop computers: 150
   Number of laptops for which you are requesting replacement funding: 70
   Average replacement cost/laptop: 2,000
What state planning region are these desktop/laptop computers located?
Region 1 4 **2** 5 **3** 2 **4** 2 **5** 9 **6** 4 **7** 459 **8** 6

4. What percentage of these pcs are running the following operating systems:
   (total should be equal to 100%)

Open Source OS	0 %
MAC OS	0 %
Windows Vista	2 %
Windows XP	95 %
Other	3 %

5. What additional expenditures are being paid out of non-appropriated funds? 0
Please explain:

IT Asset Management Plan
The Department of Health currently maintains over 300 PCs, 100 laptops and around 40 high-output laser based printers.

Our hardware asset replacement schedule is as follows:

PCs/Laptops: 4 years
Monitors: 4 years (Replacing CRTs with flat panels, flat panels are replaced as they fail)
Printers: 6 years (Some printers are kept longer depending on need and/or performance)
Servers: 4 years (This varies a great deal because some servers in our laboratories must be kept for   longer periods of time based on vendor standards, while other Federal servers we   maintain are replaced based on the federal replacement cycle which may be more or   less agressive.)

Standard software applications such as Microsoft Office and Adobe Acrobat are upgraded to the most current version of the software when a new PC or laptop is purchased. Some

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divisions upgrade this software on all of their PCs at one time to ensure uniformity, while others simply load the most current version after receiving the new PC. Software Assurance is not a mandate at the Department of Health, however some divisions have chosen to purchase it for certain Microsoft products.

Server operating system upgrades are usually done as we replace the server itself. Again, this is usually mandated by the software system running on the server and can be mandated by the vendor or by the federal government.

PC operating systems are typically pre-installed with the new purchase. The department is in the process of evaluating the Vista operating system on a limited basis and at this point is not ready to roll out this operating system department wide becase of the concerns over compatibility and performance. We are presently ordering all new PCs with the XP operating system and will continue to do so until XP is no longer available.

Our information technology coordinators that are assigned to specific sections and divisions within the department and are responsible for coordinating the IT activities, with the Lead IT coordinator for the entire department. These individuals not only posess the educational requirements necessary to hold their positions, but are then trained specifically, on the job, for the expertise they require to maintain the hardware and software they are responsible for.

Currently, we have 8 IT Coordinators:

    1) Darin Meschke, Lead IT Coordinator - Administrative Support Section - Judicial Wing
    2) Allen Johnson - Environmental Health Section - Gold Seal Campus
    3) Kevin Kosse - Environmental Health Section - Laboratory Campus
    4) Corey Bergrud - Community Health Section - Judicial Wing
    5) Jennifer Messer - Disease Control - Judicial Wing
    6) Todd Friesz - Health Resources Section - Judicial Wing
    7) Brian Miller - Health Resources Section - Judicial Wing
    8) William James - Emergency Preparedness Section - Gold Seal Campus

The coordinators are eligible to attend annual training that is required for the systems they are responsible for. The department promotes training where appropriate and allows the coordinators to schedule and attend whenever possible. Coordination of department-wide IT training is usually done by the lead IT coordinator.

When a new IT coordinator is hired at the department, an effort is made to allow the outgoing coordinator time to train his/her replacement. This is done whenever possible to allow for a smother transitition. However, when this cannot be accomplished, the coordinator obtains their training from the remaining coordinators and through on the job training.

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		CURRENT APPROPRIATION	BUDGET REQUEST	OPTIONAL ADJUSTMENTS	REQUEST PLUS OPTIONALS	SUBSEQUENT BIENNIUM
IT5110	SALARIES - PERMANENT	$0	$682,896	$0	$682,896	$0
IT5160	FRINGE BENEFITS	$0	$228,476	$0	$228,476	$0
IT5310	IT SOFTWARE AND SUPPLIES	$392,073	$364,372	$77,745	$442,117	$382,590
IT5510	IT EQUIPMENT UNDER $5000	$407,718	$372,500	$63,200	$435,700	$391,125
IT6010	IT DATA PROCESSING	$1,323,259	$1,064,061	$80,734	$1,144,795	$1,117,263
IT6020	IT COMMUNICATIONS	$518,427	$513,647	$68,324	$581,971	$539,329
IT6030	IT CONTRACT SERVICES & REPAIRS	$1,009,664	$1,641,552	$70,250	$1,711,802	$1,710,799
	Total Budget:	**$3,651,141**	**$4,867,504**	**$360,253**	**$5,227,757**	**$4,141,106**
001	STATE GENERAL FUND	$439,636	$657,000	$360,253	$1,017,253	$455,604
370	HEALTH & CONSOLIDATED LAB FUND 370	$40,258	$57,793	$0	$57,793	$47,042
H100	ADMINISTRATIVE SERVICES FEDERAL FUN	$329,460	$328,108	$0	$328,108	$222,842
H200	MEDICAL SERVICES FEDERAL FUNDS	$514,420	$651,060	$0	$651,060	$571,310
H300	HEALTH RESOURCES FEDERAL FUNDS	$217,296	$389,398	$0	$389,398	$197,161
H400	COMMUNITY HEALTH FEDERAL FUNDS	$359,829	$574,000	$0	$574,000	$493,399
H500	ENVIRONMENTAL HEALTH FEDERAL FUNDS	$708,202	$933,037	$0	$933,037	$835,040
H600	EMERGENCY PREP & RESPONSE FED FD	$956,621	$1,193,419	$0	$1,193,419	$1,237,759
H700	SPECIAL POPULATIONS FEDERAL FUNDS	$85,419	$83,689	$0	$83,689	$80,949
	Total Funding:	**$3,651,141**	**$4,867,504**	**$360,253**	**$5,227,757**	**$4,141,106**